

Abstract

The present invention relates to a device for use in a fiber optic system that may be a communication system, a sensing system or other system using guided-wave optical components. Reducing the number of lenses required to couple the waveguides and the free-space paths in the device offers the dual advantages of a reduced component count and simplified alignment. In an exemplary device having a first and second waveguides, a birefringent optical system defines bi-directional, polarization-dependent free-space paths. One of the bidirectional, polarization-dependent, free-space paths couples at least the first waveguide to the second waveguide. The birefringent optical system includes at least one prism for bending one of the polarization-dependent paths in a clockwise direction and one of the polarization-dependent paths in a counterclockwise direction.